

**Before the
Federal Communications Commission
Washington, D.C. 20054**

In the Matter of)	
)	
Review of the)	EB Docket No. 04-296
Emergency Alert System)	
)	

COMMENTS OF LOGICACMG PLC

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
SUMMARY	ii
A. Background on LogicaCMG and Its Interest in this Proceeding	4
B. Cell Broadcasting Should be Included as a Critical New Element of the Nation's EAS	6
C. LogicaCMG Recommendations.....	8
D. Response to Specific Questions	9
1. Paragraph 31 Questions	9
2. Paragraph 32 Questions	10
3. Paragraph 33 Questions.	15
4. Paragraph 35 Questions	15
5. Paragraph 39 Questions	16
6. Paragraph 40 Questions	16
CONCLUSION.....	16
APPENDIX A.....	A-1

SUMMARY

LogicaCMG plc, a major provider of information technology and systems management services to the wireless industry in the United States and throughout the world, urges the Federal Communications Commission to incorporate cell broadcast technology into its update to Emergency Alert System. Cell broadcast technology offers the opportunity to advance significantly the level of safety achieved by the Emergency Alert System. Cell broadcast messages can target affected geographic areas and reach millions of people simultaneously, continuing to provide them with updated information on how to reach safety and avoid injury as they respond to the initial alert message. Minutes – even seconds – save lives.

Cell broadcast is a proven technology available through both GSM and CDMA networks. Cell broadcast capability is currently available, though largely inactive, in U.S. GSM networks, and many GSM wireless devices are today shipped with cell broadcast capability.

Cell broadcast alerts are broadcast over a dedicated alert channel, avoiding the possibility of network congestion precluding messages from getting through to members of the public. Given the many channels available in cell broadcasting, commercial deployments of cell broadcast technology could be undertaken in conjunction with cell broadcast deployment for emergency messaging, configured so that customers would have to opt to in particular channels in order to receive any other services provided through the cell broadcast network.

In order to achieve the most modern and effective public alert and warning system, LogicaCMG recommends that the Commission:

1. Adopt cell broadcasting into the delivery system for alert messages.
2. Require that several cell broadcast channels be allocated exclusively for Emergency Alert System messages.

3. Adopt the Common Alert Protocol across all retransmission entities in the system.
4. Consider implementing cell broadcasting either generally or through a pilot program using a public/private partnership that would include initial government assistance to carriers to purchase needed software and equipment, and address funding issues for implementation of the system going forward.
5. Adopt guidelines and restrictions sufficient to ensure that emergency alerts are properly issued by the appropriate government authority and ensure that carrier activities related to cell broadcast EAS messaging are immune and protected from liability, in the same manner as 911-related services.

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LogicaCMG plc (“LogicaCMG”) hereby submits these comments in response to the Notice of Proposed Rulemaking (“*Notice*”) in the above-captioned proceeding in support of needed changes to the Emergency Alert System (“EAS”). LogicaCMG is a major international company providing information technology and systems management services to the wireless industry in the United States and throughout the world. LogicaCMG appreciates this opportunity to provide these comments to the Federal Communications Commission (“FCC” or “Commission”) on the need for modernizing the EAS and for creating alternative methods for communicating emergency information to the American public.

DISCUSSION

A. Background on LogicaCMG and Its Interest in this Proceeding

LogicaCMG’s North American region is headquartered in Lexington, MA and has offices in Bellevue, WA, Dallas, TX, Richmond, VA, and Atlanta, GA. The company also has offices in 33 other countries around the world. LogicaCMG systems:

- Process more than 2 out of every 3 mobile text messages sent in the world;

- Were the first to develop mobile commercial text messages, mobile text messaging for 3G networks, and commercial deployment of mobile multi-media messages;
- Delivered the first secure e-commerce transactions over a mobile phone;
- Provide solutions which serve over 500 million active mobile phone subscribers worldwide;
- Support some 250 operators in more than 70 countries, including half of the world's digital mobile operators; and
- Are unsurpassed in in-depth experience with penetration testing, forensics, security architecture design, and security policies.

LogicaCMG's Global Telecoms unit is the world leader in short message service ("SMS"), as well as one of the top three suppliers of multimedia messaging systems ("MMS"). LogicaCMG is also a leader in the development of global wireless Internet, delivering innovative products and applications for second- and third-generation networks. As discussed more fully below, LogicaCMG has extensive experience developing and deploying cell broadcast technology in connection with emergency alert and other applications designed by the Government of the Netherlands and the wireless industry in the Netherlands¹ and urges the Commission to include the deployment of cell broadcast technology as a component of the next generation EAS.² LogicaCMG is attaching to these comments a brief paper as Appendix A on how the cell broadcast system operates in the Netherlands as an emergency alert system, including a description of the limited "seed" money for the system provided by the Dutch

¹ LogicaCMG has 50 customers worldwide using cell broadcast systems.

² Two companies currently provide alert services in the United States using cell broadcasting technology. See:

CEASA at <http://ceasa-int.org>; and

Safety Through Cellular at <http://www.safetythroughcellular.com>

government and the plan for future funding to sustain the system through commercial uses of some of the cell broadcast channels.³

B. Cell Broadcasting Should be Included as a Critical New Element of the Nation's EAS

The Commission is to be applauded for undertaking this much needed rulemaking. As the Commission recognizes in the *Notice*, the many advances in communications technology since the development of the EAS offer new and highly effective ways to communicate emergency information to members of the public beyond radio and television broadcast stations. Information can now travel directly to individuals and move with them as they react to warnings, calls for evacuations, and advice on what to do to reach safety. Today's U.S. communication's landscape is obviously a far cry from that of the 1950's when the current EAS system was created. As the *Notice* recognizes, major increases in safety can be achieved with a new EAS system that incorporates advances and advantages of our modern communications systems.

The ability of authorized governmental entities to send an instant message capable of receipt over various communications devices is essential to providing warnings and information in a manner that can save the most lives and prevent the most injuries. No single change and no single additional platform will achieve the "efficient and technologically current public alert and warning system" the *Notice* seeks to achieve.⁴ Rather, the use of multiple communications platforms is required to convey to the public emergency information in a timely and effective manner.

³ Obviously, as in other safety-related deployments, funding of cell broadcast system deployment and operation is a critical issue for the Commission, the industry and the public safety community. The Dutch model is one approach to the funding issue, and other approaches, such as direct funding by the government should be considered in the context of this rulemaking.

⁴ See *Notice*, ¶ 1.

Cell broadcasting provides just such a solution. In contrast to voice communications and SMS, which send a unique message to the device of a particular user, cell broadcasting technology literally broadcasts text messages to all activated handsets of wireless subscribers in a particular geographic area defined by the entity activating broadcast of a particular message. According to the Commission, mobile penetration surpassed 50 percent of the population in 2003 (up from just 25% at the end of 1998), and that percentage is forecast to continue rising significantly in the next five years.⁵ Given this current and increasing penetration level, incorporating cell broadcast technology in the fundamental architecture of the EAS system would be a major step forward in improving public safety.

Cell broadcasting technology is a standard feature today in all GSM networks.⁶ Importantly, because cell broadcast channels are separate, dedicated channels, high volumes of traffic, which have resulted in blocked calls in times of emergency, are not an issue for cell broadcast messages.⁷ Regardless of congestion on other portions of the network, in an emergency, cell broadcasts can and will get through.

Moreover, GSM phones currently shipped in the U.S. are typically cell broadcast-capable without the addition of any software or add-on features. Cell broadcast-enabled phones, however, are shipped with the cell broadcast function switched off, and the cell broadcasting

⁵ Memorandum Opinion and Order, *Matter of Applications of AT&T Wireless Svcs., Inc. and Cingular Wireless Corp. For Consent to Transfer Control of Licenses and Authorizations*, WT Docket No. 04-70, FCC 04-255 ¶ 67 (rel. Oct. 26, 2004) (“Cingular/AT&T Order”)

⁶ Cell broadcasting is also standardized in CDMA networks, but, to date, has not been implemented widely in CDMA networks in the U.S. Implementation of cell broadcasting into CDMA networks may therefore involve additional costs and have a longer ramp-up than with GSM networks, but should likewise be included in the EAS cell broadcast solution.

⁷ One of the lessons learned from 9/11 was the difficulty of communicating over traffic-clogged communications networks, especially for emergency workers and agencies. *See Wireless Priority Service/Program Information* (available at National Communications System website, <http://wps.ncs.gov>). *See generally also* Second Report and Order, *Matter of the Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service*, 15 FCC Rcd. 16720 (2000).

function must currently be turned on by the cell phone user. If the Commission incorporates cell broadcast technology into its revamped EAS, future phones could be shipped with the cell-broadcast capability activated, at least with respect to the cell broadcast channels set aside for EAS use.

C. LogicaCMG Recommendations

For these reasons, cell broadcast technology provides a unique and ubiquitous solution for alerting the public to emergency situations. Accordingly, in order to achieve the most modern and effective public alert and warning system, LogicaCMG recommends that the Commission:

1. Adopt cell broadcasting into the delivery system for emergency messages.
2. Require that several specified cell broadcast channels be dedicated exclusively for EAS use.
3. Adopt the Common Alert Protocol (“CAP”) across all retransmission entities in the system.
4. Consider implementing cell broadcasting either generally or through a pilot program using a public/private partnership that would include initial government assistance to carriers to purchase needed software and equipment and address funding issues for implementation of the system going forward.
5. Adopt guidelines and restrictions sufficient to ensure that emergency alerts are properly issued by the appropriate government authority, and ensure that carrier activities related to cell broadcast EAS messaging are immune and protected from liability, in the same manner as 911-related services.⁸

⁸ See 47 U.S.C. § 615a.

D. Response to Specific Questions

1. Paragraph 31 Questions

Whether the current level of penetration is sufficient to comprise an effective public warning system, and if not, what level of penetration should the Commission seek and what is the best mechanism for reaching that goal.

LogicaCMG believes the current level of penetration is woefully inadequate to meet the emergency alert needs of a modern citizenry, particularly in the first few, critical minutes of an emergency. When an emergency situation occurs, people are not necessarily at home listening to a television or radio or at a work situation that provides such access. People need to receive warnings wherever they are, whatever they are doing. Minutes – even seconds – save lives. With increasing wireless penetration that currently exceeds 50% of the population, incorporating cell broadcast technology in the new EAS, provides the most efficient and effective method of reaching simultaneously a majority of the population, and offers a tremendous advance in the nation's safety alert system.

A wireless device typically moves with the user, no matter where the user is or is traveling. If an emergency occurs in a particular area, people could, for example, be warned to vacate the area, while others in adjoining areas can be warned to stay inside. Using cell broadcasting, the government entity generating the warning can provide informed, geographically-targeted notifications and can also provide information on when the situation is once again safe.

Messages up to 93 characters in length⁹ can be broadcast simultaneously to all wireless handsets in a given area on a dedicated channel set aside for emergency alerts. The telephone

⁹ Actually, one complete message can consist of a maximum of 15 pages of 93 characters each. These pages are broadcast as separate messages and the phone concentrates them into a single message of almost 1,400 characters. We are assuming, however, in an emergency alert, the agency generating the message would be likely to send a message with fewer than 93 characters.

number of the particular user is irrelevant; the message is delivered simultaneously to all mobile telephone users in the designated area. Whereas SMS is focused on one-to-one, or one-to-a-few service, and uses channels that may be congested in a high-volume, emergency situation, cell broadcast is one-to-many service using existing channels dedicated to cell broadcast that remain unaffected regardless of network congestion.

Speed is also an advantage of cell broadcast technology. Within three minutes a message reaches the recipient, regardless of the size of the broadcast area.¹⁰

Because cell phones move with the person, not only is penetration increased, but crowd control can be significantly improved. If, for example, a particular subway station or highway cannot be used, people with cell-broadcast enabled devices in a targeted geographic area can be directed to the nearest safe route, avoiding potential delays, injuries, or even deaths as people are directed to the safest exit strategy.

2. Paragraph 32 Questions

Whether the current EAS is outdated, and whether there should be a concerted government/industry effort to combine EAS with alternative public alert and warning systems to form a comprehensive national public warning system capable of reaching virtually everyone all the time.

For the reasons discussed above, the current EAS is outdated and ill-suited to the public's needs. The FCC incorporating cell broadcasting into the new EAS system would offer federal and state emergency agencies the ability to reach millions more people virtually in real time. As noted, all cell phone users in a particular area could receive a warning message within three minutes. This capability must be incorporated into a new EAS if the goal of reaching "virtually

¹⁰ Working with one of its customers, LogicaCMG found during testing of a cell broadcast system in Germany that 20 million people were reached in 20 seconds.

everyone all the time” is to be achieved. Real-time capability – so crucial in emergency situations – is simply not possible through most other services.

Cell broadcasting uses a dedicated channel that is always available even if voice and data channels are congested. Other services cannot offer this significant advantage. SMS text messages, for example, make use of the call setup channel in the signaling channel. The call setup channel is also used to set up voice calls, making this channel susceptible to congestion.

How a combined warning system that makes use of cell broadcasting would be implemented and whether alternate warning systems should be required to be compatible with the existing EAS protocol.

Cell broadcasting requires the use of cell broadcast centers (“CBCs”) to reach cell phone users in a particular geographic area. The new EAS should incorporate CBCs as one of the retransmission points for emergency messages from federal, state or local governments. When needed, the affected government agency would decide the geographic parameters of the message, utilizing the ability of the cell broadcasting system to direct the warning to the cell sites in the affected area.

Implementing cell broadcasting services will require additional equipment and software, as well as decisions on whether phone manufacturers should have to modify the current conditions under which the cell broadcast channel can be accessed. In addition, networks would need to configure cell broadcasting technology in their networks. If cell broadcasting is an optional feature under a current agreement, a license cost may be involved. Equipment and deployment issues will need to be addressed, in particular how these system enhancements will be funded.

LogicaCMG is preparing a technical paper, which will be provided to the FCC, on cell broadcast system implementation and its interoperability with the current EAS. A short paper

describing the implementation of cell broadcasting as part of the emergency alert program of the Netherlands is attached to these comments. In brief, with respect to equipment and software, cell broadcast service requires:

1. One or more cell broadcast terminals. The cell broadcast terminal lets the message provider select the area(s) to which the message will be sent, and then define the message, such as selecting the type of message to be sent (e.g., a weather warning), and how often it is to be repeated. The originating agency would need to have, or have access to, such a terminal.
2. A cell broadcast center. Wireless networks would need a CBC. The CBC has a database containing all of the network's base transmission stations and their coverage area (i.e., cells). Using a standardized protocol, the CBC communicates the message through the wireless network.
3. Base station controller and software. Cell broadcasting functionality needs to be activated in a carrier's network through modifications to the system configuration.

GSM handsets typically include cell broadcast capabilities, but even in these, cell broadcast channels must be activated by the user for the handset to receive messages over these channels. As part of an updated EAS incorporating cell broadcast technology, a particular cell broadcast channel or channels would have to be set aside for emergency alerts, standardized across all networks, and a provision included in the rules requiring cell phones to be shipped with those channels activated.

In addition, the Commission would have to designate the type and level of alert that would have access to that channel to avoid spam-related issues and address whether the alert capability could be switched off by subscribers. At a minimum, LogicaCMG recommends

subscribers have the ability to opt out or be required to opt-in to alerts below a certain level, as well as to opt-in to all commercial uses of the cell broadcast channels. Without such capability, there exists the risk that this new technology will be viewed as just another form of spam, leading to significant consumer resistance.

Legal or practical barriers to implementation and effectiveness, including whether legislation would be required from Congress or by Executive Order.

Finding the appropriate manner in which to implement and fund the benefits of cell broadcast capability for the EAS is one of the practical considerations that will require additional examination by the Commission. Implementing such a capability through a public/private partnership is described in the briefing paper included as Appendix A on how cell broadcast emergency system is being implemented in the Netherlands. The system set up in the Netherlands is based on an initial infusion of government funding to carriers for equipment costs and then permitting private, commercial uses of some of the cell broadcast channels in order to provide the future funding for the system. The individual carriers retain the right to use 20% of the capacity, commercial users are allowed to use 40%,¹¹ and the remaining 40% is reserved for the Dutch government. In the United States, the Commission might want to consider undertaking a pilot program to test this or any other method of implementing cell broadcasting capability, as well as develop alternative proposals to fund deployment of the system.

LogicaCMG is not aware of any current legal barriers to the deployment of cell broadcasting technology as part of a new EAS. If, however, commercial use of the channels is permitted, current rules applicable to other technologies may need to be clarified.

¹¹ Commercial services using cell broadcast stations could include information services such as the name of the area or street where the user is located, telephone numbers of the nearest hospital, location of the nearest drug store or gas station; or announcements at event such as guidance to parking locations, waiting times for attractions, etc.

For example, because commercial messages broadcast to cell phones would not be sent via electronic mail or the Internet, the Controlling the Assault of Non-Solicited Pornography and Marketing (CAN-SPAM) Act of 2003 (Pub. L. No. 108-187, 117 Stat. 2699) would not apply. Nevertheless, cell phone users have a significant interest in being free from unwanted commercial intrusions on their wireless phones, just as they do with their wired phones. CAN-SPAM recognizes this interest in the context of e-mail mobile messages, but does not address cell broadcast messages. The principles underlying CAN-SPAM suggest that the Commission needs to consider these issues in any implementation of a cell broadcasting system that incorporates commercial use of the channels. For that reason, LogicaCMG recommends that only the highest levels of alert messages be subject to automatic receipt and that the user have the option to opt in or opt out of anything below the highest level of governmental emergency alerts. A phone user should, for example, be able to opt out (or not opt into) AMBER alerts or routine weather alerts. Ensuring an appropriate balance between the user's interest in controlling unwanted commercial messages and the government's need to get important safety messages to members of the public will be one of the important considerations in the establishment of this new platform of communication.

In addition, the issue of liability for the retransmission of an emergency alert message needs to be addressed. The Commission needs to establish mechanisms for sufficient validation of messages and establish criteria for the governmental entities that may broadcast messages. As is the case with the wireless provision of E-911, the Commission must also ensure that carrier activities related to cell broadcast of EAS messaging are immune and protected from liability.¹²

¹² See 47 U.S.C. § 615a.

3. Paragraph 33 Questions.

Whether the appropriate approach would be to integrate EAS into a “system of systems” by adopting and using a single, integrated interface that would link the emergency manager and all emergency notification and delivery systems, regardless of the technology on which a particular system is based, such as the adopted Common Alerting Protocol (“CAP”); Whether the CAP could act as an effective interface through which an emergency manager could access multiple emergency notification services, including EAS.

CAP could be easily integrated into a cell broadcasting system. Messages in CAP format can be converted to cell broadcast messages using these protocols. Almost all parameters of a cell broadcast message are available in a CAP-formatted message.

The critical issue is not so much a formatting one, but how the CAP formatted messages are generated and the specification of the governmental entity that has authority to initiate messages for broadcast over the cellular network and the level of alert suitable for such broadcast. Cellular broadcast is an extremely powerful technology for reaching geographically-targeted users. However for the very reason that it is so powerful, parameters must be carefully devised to govern its use.

4. Paragraph 35 Questions

The extent to which an effective public warning system depends on the consumer electronics equipment that receives the warning and whether mandating the adoption of technology that automatically turns on the equipment enhances the effectiveness of EAS.

Effectiveness of the new EAS would be enhanced if all cell phones have the cell broadcast channel activated (subject to the opt in or opt out feature as discussed above). At the moment, the cell broadcast feature on a cell phone must be turned on by the user and channels of interest selected. A total of 999 channels can be activated from the menu on the phone, once there is an active cell broadcast system. Channel 911, for example, could be devoted to government emergency alert messages. Other channels could carry messages such as AMBER Alerts, weather alerts, traffic alerts, etc.

Cell broadcast functionality usually resides in the messages menu on a cell phone, but the service is not always called cell broadcast. Different names across brands of cellular phones and very short descriptions in manuals may suggest that this functionality is not available or at least is not understood. Greater awareness of the potential of the phone to provide cell broadcast messages can be addressed through public education efforts on the part of the government and/or the providers, once a cell broadcast system is implemented.

5. Paragraph 39 Questions

Alerting individuals with disabilities of EAS activation.

Cell phones already contain the option of using vibration, rather than a ring tone, to notify the owner of a message. This feature could be used to notify the hearing disabled of an emergency alert.

6. Paragraph 40 Questions

Providing Emergency warnings to non-English speakers.

Cell broadcast messages are text messages that can be broadcast in various languages. With the multiplicity of channels available in cell broadcasting, the English language message could be broadcast on one channel, while other channels could be standardized for other languages. Alternatively, because each message has a language parameter and a cell phone can be configured to discard messages in all other languages except a designated language, the phone could be configured to accept only the language designated by the user for emergency messages.

CONCLUSION

The incorporation of cell broadcasting technology into the EAS would significantly advance the ability of federal, state, and local governments to provide emergency alert notices and information to affected members of the public. LogicaCMG urges the Commission to

implement cell broadcasting technology in the next generation EAS, thereby ensuring a robust, efficient and technologically-advanced alert and warning system required to ensure the safety and security of the American public.

Respectfully submitted,

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Dated: October 29, 2004



Case Study

Cell Broadcast in the Netherlands An Overview

Press Release,
August 5 2004

A consortium consisting of **LogicaCMG, Backstream** and the foundation **Platform Mobile Messaging** has been commissioned by the Dutch Ministry of Economic Affairs to provide access the world's first government sponsored mobile alert service based on cell broadcast (CB) technology.

What is Cell Broadcast?

Cell broadcast, makes it possible to provide text-like instructions for citizens in a specific location, for example providing instructions to people to stay inside and close their windows because there is a gas leak.

What is Cell Broadcast in the Netherlands?

The Dutch mobile operators stated that they are willing to implement CB in their networks. This is necessary in order for everyone in the Netherlands to be able to receive a CB message, independent of their chosen mobile operator.

Unlike SMS (text messaging), with CB the sender does not need to know the mobile phone number of the recipient. A CB message is more like a radio message that is broadcasted in specific cells and anyone in the area, within the coverage of the cells, with a mobile phone will receive it. Since CB is not limited by network congestion its distribution goes much quicker than sending an SMS message to a larger group. Within three minutes the message can reach the recipient, regardless of the size of the area.

The Dutch Minister of Economic Affairs (US equivalent: Secretary for Commerce) Mr. Brinkhorst stated: "Cell Broadcast is a likely candidate that supports a better utilization of the existing ICT Networks and the vital growth of the use of digital communication within the government."

The Dutch Ministry of Economic Affairs, the Ministries of Transport and Public Works, Internal Affairs and National Health will all work together and will invest EUR 2.5 million to have access to 40 per cent of the CB-system over the next two years. Private sector companies (including the telecom operators)

can use the remaining 60 per cent for commercial activities.

The role of the government

The Dutch government wants to use a CB infrastructure as an additional means to communicate with its citizens. However, a commercial party shall take the initiative to implement and operate the infrastructure and the associated services.

The Dutch government wants to use Cell Broadcast for:

- Alerting citizens of emergency situations,
- Crowd control and "missing child" alerts
- General announcements
- Target group services

The role of the foundation

Essential in this structure is that most, if not all operators join this initiative. This way, giving access to all mobile subscribers in the country.

The fund of 2.5 million Euros the government has awarded to the consortium is partly used to purchase Cell Broadcast Systems from LogicaCMG that are made available to operators at no cost to the operator, partly to purchase the Gateway from Backstream, and partly to pay the operators 0.2 FTE for support of the Cell Broadcast System.

The foundation's domain is shown in the picture. The Gateway provides web access to a Content Management system where messages are submitted by the content owners, and distributed towards the Cell Broadcast Centres.

The role of the foundation is twofold: Operating the Gateway, and selling 40% of

the capacity to content providers. During the trial period of two years this commercially sold capacity must guarantee that the service can continue after the trial period has ended.

Examples of commercial services would be:

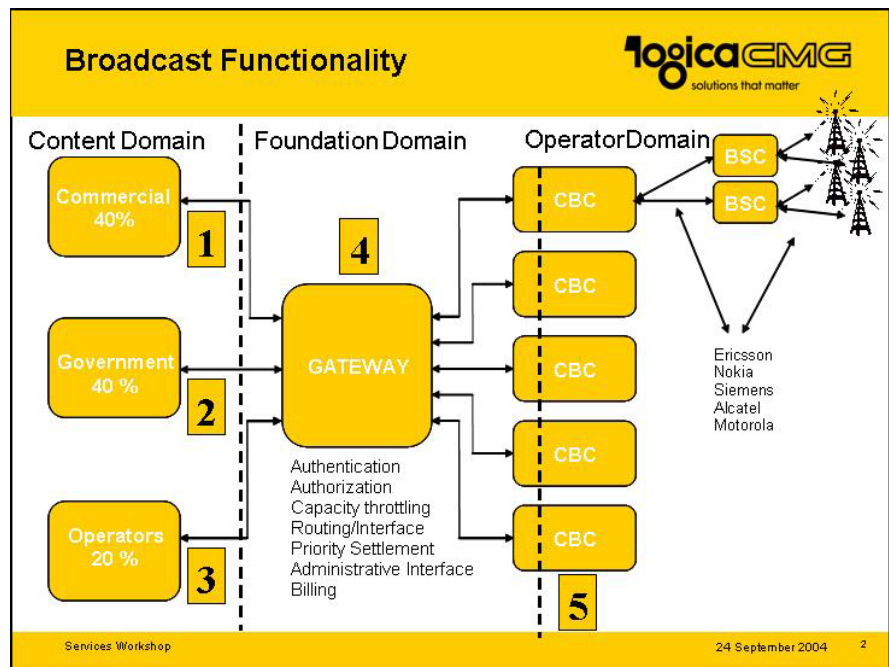
- Closed user groups, for corporate purposes
- Tourist info, traffic info, weather info
- Advertisements
- Mobile games

The foundation will actively promote the use of the CB services and help to educate the public on how to receive CB messages on their mobiles. Day-to-day operations of the foundation therefore include the services of a help-desk to answer questions from Dutch citizens regarding the Cell Broadcast service. The subscribers of the operators can be forwarded to the foundation's help desk.

Messages from the Dutch government always take priority over any other messages. The Gateway settles these priorities.

The role of the telecom operator

The operator has access to a Cell Broadcast System at no charge. However, costs are involved in operating and maintaining the system. These costs can be recovered in two ways: Operators share in the revenue of the commercially sold capacity and 20% of the capacity can be employed by the operators for their own services. This gives operators the possibility to experiment with Cell Broadcast services at a very low cost. Possible services are promotion of SMS content and premium services that are provided by the operator. Teasers can be broadcast to promote the use of these services.



What happens after the trial?

The trial lasts two years. When this period ends, the Dutch government and the operators will evaluate the service and decide if it has proven to be successful. If the decision is positive, the foundation will continue to run the operation on a fully commercial basis.

What makes this so unique?

The Cell Broadcast service in the Netherlands is unique in the sense that all operators are involved, and content providers can reach all mobile phone users.

Secondly, the operators get access to a Cell Broadcast system at virtually no cost. Quite often it is difficult for a single operator to

create a profitable business case on CB, if the operator alone must define a service and educate its subscribers about the availability of the service and the configuration of the phones.

Last but not least, the Dutch government has enabled the creation of a nation-wide Cell Broadcast infrastructure. A chain has been formed that can only exist with the contribution and vision of all participants. The government has stimulated the development of services. **Services that can make the difference and can save peoples lives.**

To discuss the application of IT in your business, Please contact LogicaCMG

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About LogicaCMG

LogicaCMG is a global solutions company.

LogicaCMG is a major international force in IT services and wireless telecoms. It provides management and IT consultancy, systems integration and outsourcing services to clients across diverse markets including telecoms, financial services, energy and utilities, industry, distribution and transport and the public sector. Formed in December 2002, through the merger of Logica and CMG, the company employs around 20,000 staff in offices across 34 countries and has nearly 40 years of experience in IT services. Headquartered in Europe, LogicaCMG is listed on both the London and Amsterdam stock exchanges (LSE: LOG; Euronext: LOG). More information is available from www.logicacmg.com

LogicaCMG is the global leader in telecom messaging and payments, delivering two out of every three text messages and supplying next generation messaging and billing solutions to 250 of the world's top operators in over 70 countries. These solutions serve more than 500 million active mobile phone subscribers. LogicaCMG also delivers one out of every four multimedia messaging systems, with commercially deployed MMS solutions serving over 85 million subscribers around the world.